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Reply to Office Action of 04/10/2007

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PENDING CLAIMS AS AMENDED

Please amend the claims as follows:

1.   (Previously Presented) In a wireless communication system, a method for controlling a data transmission between a transmission source and a receiving device, the method comprising:

receiving a current transmission at a current data rate for a current transmission interval;

detecting an average throughput for the data transmission and reflective of the current transmission;

comparing the detected average throughput against a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate; and

signaling the transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput.

2.   (Original) The method of claim 1, further comprising:

signaling the transmission source to resume the data transmission if the threshold throughput is not exceeded.

3.   (Cancelled)

4.   (Cancelled)

5.   (Previously Presented) The method of claim 1, further comprising characterizing the performance of the receiving device prior to first field use of the receiving device.

6.   (Previously Presented) The method of claim 1, further comprising characterizing the performance of the receiving device dynamically during field use.

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7.   (Previously Presented) In a wireless communication system, a method for controlling a data transmission between a transmission source and a receiving device, the method comprising:

receiving a current transmission at a current data rate for a current transmission interval;

detecting an average throughput for the data transmission and reflective of the current transmission;

comparing the detected average throughput against a threshold throughput;

signaling the transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput; and

averaging a value indicative of a throughput for the current transmission with values indicative of throughputs for one or more prior transmissions in one or more prior transmission intervals, wherein the averaging is achieved with a sliding window averaging.

8.   (Previously Presented) The method of claim 7, wherein the averaging is further achieved with a particular averaging scheme selected based in part on a design of a data buffer used to store samples for the data transmission.

9.   (Cancelled)

10.   (Cancelled)

11.   (Previously Presented) In a wireless communication system, a method for controlling a data transmission between a transmission source and a receiving device, the method comprising:

receiving a current transmission at a current data rate for a current transmission interval;

detecting an average throughput for the data transmission and reflective of the current transmission;

comparing the detected average throughput against a threshold throughput; and

signaling the transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput, wherein the signaling includes sending a

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message to the transmission source to request the data transmission be stopped, and wherein the message is covered by a null cover that indicates that data transmission is not requested by the receiving device.

12.   (Previously Presented) The method of claim 11, wherein the message requests a transmission at zero data rate..

13.   (Previously Presented) The method of claim 11, wherein the message is sent for each transmission interval in which a transmission is not requested.

14.   (Previously Presented) The method of claim 7, further comprising:
resetting the average throughput to an initial value prior to reception of a first transmission for the data transmission.

15.   (Original) The method of claim 1, wherein the data transmission is transmitted in time division multiplexed (TDM) transmission intervals.

16.   (Original) The method of claim 1, wherein the wireless communication system is an HDR CDMA system.

17.   (Original) The method of claim 1, wherein the wireless communication system is a CDMA system that conforms to W-CDMA standard or cdma2000 standard.

18.   (Previously Presented) The method of claim 7, further comprising:
if the data transmission has been stopped and the threshold throughput is not exceeded, signaling the base station to resume the data transmission.

19.   (Previously Presented) A terminal operative to receive a data transmission from a transmission source in a wireless communication system, the terminal comprising:
a receiver unit operative to receive and process a modulated signal for the data transmission to provide digitized samples;

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a demodulator coupled to the receiver unit and operative to receive and process the digitized samples to provide a value indicative of a current data rate for a current transmission in a current transmission interval;

a detector coupled to the demodulator and operative to

detect an average throughput for the data transmission, wherein the average throughput is reflective of the current data rate for the current transmission,

compare the detected average throughput against a threshold throughput, and

provide a status signal indicative of a result of the comparison between the detected average throughput and the threshold throughput;

a controller coupled to the detector and operative to receive the status signal and generate a message requesting the transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput; and

a transmitter unit coupled to the controller and operative to receive and transmit the message,

wherein the detector includes:

a filter operative to receive a value indicative of a throughput for the current transmission and provide the average throughput, and

a comparator coupled to the filter and operative to receive and compare the average throughput with the threshold throughput to provide the status signal.

20.   (Cancelled)

21.   (Previously Presented) The terminal of claim 19, wherein the filter is implemented as a finite impulse response (FIR) filter.

22.   (Original) The terminal of claim 19, wherein the message conforms to a DRC message defined by an HDR CDMA system.

23.   (Currently Amended) A processor-readable medium comprising instruction codes which, when executed by a processor, cause the processor to perform operations including computer program product, comprising:

computer-readable medium comprising:

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~~code for~~ receiving a current transmission at a current data rate for a current transmission interval;

~~code for~~ detecting an average throughput for ~~the~~ a data transmission and reflective of the current transmission;

~~code for~~ comparing the detected average throughput against a threshold throughput;

~~code for~~ signaling ~~the~~ a transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput; and

~~code for~~ averaging a value indicative of a throughput for the current transmission with values indicative of throughputs for one or more prior transmissions in one or more prior transmission intervals, wherein the averaging is achieved with a sliding window averaging.

24.   (Currently Amended) A processor-readable medium comprising instruction codes which, when executed by a processor, cause the processor to perform operations including ~~computer program product, comprising~~:

~~computer-readable medium comprising:~~

~~code for~~ receiving a current transmission at a current data rate for a current transmission interval;

~~code for~~ detecting an average throughput for ~~the~~ a data transmission and reflective of the current transmission;

~~code for~~ comparing the detected average throughput against a threshold throughput; and

~~code for~~ signaling ~~the~~ a transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput, wherein the signaling includes sending a message to the transmission source to request the data transmission be stopped, and wherein the message is covered by a null cover that indicates that data transmission is not requested by ~~the~~ a receiving device.

25.   (New) The method of claim 1, wherein the threshold throughput is set lower than the maximum supported average data rate to account for signaling delay.

26.   (New) The method of claim 1, further comprising:

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signaling the transmission source to transmit at a lower data rate that does not cause the average throughput to exceed the threshold throughput, instead of stopping the data transmission, if the detected average throughput exceeds the threshold throughput.

27.   (New) A processor-readable medium comprising instruction codes which, when executed by a processor, cause the processor to perform operations including:

receiving a current transmission at a current data rate for a current transmission interval;

detecting an average throughput for a data transmission and reflective of the current transmission;

comparing the detected average throughput against a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate; and

signaling a transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput.

28.   (New) An apparatus for controlling a data transmission between a transmission source and a receiving device in a wireless communication system, the apparatus comprising:

means for receiving a current transmission at a current data rate for a current transmission interval;

means for detecting an average throughput for the data transmission and reflective of the current transmission;

means for comparing the detected average throughput against a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate; and

means for signaling the transmission source to stop the data transmission if the detected average throughput exceeds the threshold throughput.

29.   (New) The apparatus of claim 28, further comprising:
means for signaling the transmission source to resume the data transmission if the threshold throughput is not exceeded.

30.   (New) The apparatus of claim 28, further comprising:

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means for averaging a value indicative of a throughput for the current transmission with values indicative of throughputs for one or more prior transmissions in one or more prior transmission intervals.

31.   (New) The apparatus of claim 28, further comprising:

means for covering a message with a null cover to indicate that data transmission is not requested by the receiving device; and

means for sending the message to the transmission source to request the data transmission be stopped.

32.   (New) The apparatus of claim 28, further comprising:

means for generating a message requesting a transmission at zero data rate; and

means for sending the message to the transmission source to request the data transmission be stopped.

33.   (New) The apparatus of claim 28, further comprising:

means for signaling the transmission source to transmit at a lower data rate that does not cause the average throughput to exceed the threshold throughput, instead of stopping the data transmission, if the detected average throughput exceeds the threshold throughput.

34.   (New) An apparatus for receiving a data transmission from a transmission source in a wireless communication system, the apparatus comprising:

a detector operative to receive a value indicative of a current data rate for a current transmission in a current transmission interval, to detect an average throughput for the data transmission and reflective of the current transmission, to compare the detected average throughput against a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate, and to provide a status signal indicative of a result of the comparison between the detected average throughput and the threshold throughput; and

a controller coupled to the detector and operative to receive the status signal and to signal the transmission source to stop the data transmission if the status signal indicates that the detected average throughput exceeds the threshold throughput

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35.   (New) The apparatus of claim 34, wherein the controller is operative

to signal the transmission source to resume the data transmission if the threshold

throughput is not exceeded.

36.   (New) The apparatus of claim 34, wherein the detector is operative

to average a value indicative of a throughput for the current transmission with values

indicative of throughputs for one or more prior transmissions in one or more prior

transmission intervals.

37.   (New) The apparatus of claim 34, wherein the controller is operative

to cover a message with a null cover to indicate that data transmission is not

requested, and

to send the message to the transmission source to request the data transmission be

stopped.

38.   (New) The apparatus of claim 34, wherein the controller is operative

to generate a message requesting a transmission at zero data rate; and

to send the message to the transmission source to request the data transmission be

stopped.

39.   (New) The apparatus of claim 34, wherein the controller is operative

to signal the transmission source to transmit at a lower data rate that does not cause

the average throughput to exceed the threshold throughput, instead of stopping the data

transmission, if the detected average throughput exceeds the threshold throughput.

40.   (New) A method for sending a data transmission to a receiving device in a

wireless communication system, the method comprising:

receiving data to send to the receiving device;

entering a wait state if the data transmission to the receiving device has been stopped

based on signaling sent by the receiving device when a detected average throughput at the

receiving device exceeds a threshold throughput, wherein the threshold throughput is based

on a maximum supported average data rate for the receiving device; and

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sending the data to the receiving device if the data transmission has not been stopped or upon exiting the wait state when the data transmission is resumed.

41.   (New) The method of claim 40, wherein the entering the wait state comprises entering the wait state in response to receiving a message covered with a null cover from the receiving device.

42.   (New) The method of claim 40, wherein the entering the wait state comprises entering the wait state in response to receiving a message requesting a transmission at zero data rate from the receiving device.

43.   (New) The method of claim 40, further comprising:
exiting the wait state in response to receiving signaling sent by the receiving device to resume the data transmission when the threshold throughput is not exceeded at the receiving device.

44.   (New) The method of claim 40, further comprising:
sending the data at a lower data rate that does not cause the average throughput to exceed the threshold throughput at the receiving device, instead of entering the wait state, if signaling indicating that the detected average throughput exceeded the threshold throughput is received from the receiving device.

45.   (New) An apparatus for sending a data transmission to a receiving device in a wireless communication system, the apparatus comprising:
    means for receiving data to send to the receiving device;
    means for entering a wait state if the data transmission to the receiving device has been stopped based on signaling sent by the receiving device when a detected average throughput at the receiving device exceeds a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate for the receiving device; and
    means for sending the data to the receiving device if the data transmission has not been stopped or upon exiting the wait state when the data transmission is resumed.

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46.   (New) The apparatus of claim 45, wherein the means for entering the wait state comprises

means for entering the wait state in response to receiving a message covered with a null cover from the receiving device.

47.   (New) The apparatus of claim 45, wherein the means for entering the wait state comprises

means for entering the wait state in response to receiving a message requesting a transmission at zero data rate from the receiving device.

48.   (New) The apparatus of claim 45, further comprising:

means for exiting the wait state in response to receiving signaling sent by the receiving device to resume the data transmission when the threshold throughput is not exceeded at the receiving device.

49.   (New) The apparatus of claim 45, further comprising:

means for sending the data at a lower data rate that does not cause the average throughput to exceed the threshold throughput at the receiving device, instead of entering the wait state, if signaling indicating that the detected average throughput exceeded the threshold throughput is received from the receiving device.

50.   (New) An apparatus for sending a data transmission to a receiving device in a wireless communication system, the apparatus comprising:

a data queue operative to receive data to send to the receiving device; and

a scheduler operative to enter a wait state if the data transmission to the receiving device has been stopped based on signaling sent by the receiving device when a detected average throughput at the receiving device exceeds a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate for the receiving device, and to send the data to the receiving device if the data transmission has not been stopped or upon exiting the wait state when the data transmission is resumed.

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51.   (New) The apparatus of claim 50, wherein the scheduler is operative to enter the wait state in response to receiving a message covered with a null cover from the receiving device.

52.   (New) The apparatus of claim 50, wherein the scheduler is operative to enter the wait state in response to receiving a message requesting a transmission at zero data rate from the receiving device.

53.   (New) The apparatus of claim 50, wherein the scheduler is operative to exit the wait state in response to receiving signaling sent by the receiving device to resume the data transmission when the threshold throughput is not exceeded at the receiving device.

54.   (New) The apparatus of claim 50, wherein the scheduler is operative to send the data at a lower data rate that does not cause the average throughput to exceed the threshold throughput at the receiving device, instead of entering the wait state, if signaling indicating that the detected average throughput exceeded the threshold throughput is received from the receiving device.

55.   (New) A processor-readable medium comprising instruction codes which, when executed by a processor, cause the processor to perform operations including:
        receiving data to send to a receiving device;
        entering a wait state if a data transmission to the receiving device has been stopped based on signaling sent by the receiving device when a detected average throughput at the receiving device exceeds a threshold throughput, wherein the threshold throughput is based on a maximum supported average data rate for the receiving device; and
        sending the data to the receiving device if the data transmission has not been stopped or upon exiting the wait state when the data transmission is resumed.